2018
EH Scan

National Collaborating Centre for Environmental Health
Centre de collaboration nationale en santé environnementale

ENVIRONMENTAL HEALTH RESEARCH SCAN

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Environmental Health (EH) Research Scan: Aims and Scope

NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with NCCEH's vision to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. "*We focus on health risks associated with the physical environment and identify evidence-based interventions to mitigate those risks*." This review is not official or peer reviewed. It does not cover all research, news, and information, and NCCEH is not responsible for the accuracy of the content from media or databases. How to access the items? Click on the link related to each entry and it should take you to the item. Not all links are open access; some are abstract links where paid journal subscription is required.

National Collaborating Centre for Environmental Health

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EDITOR PICKS

Pesticide exposure in the urban environment [topic page].

National Collaborating Centre for Environmental Health, 2018

"*This report will examine what has been gleaned so far from the six current study cities and examine the state of knowledge and interventions in Vancouver, as the first representative Canadian city*."

Neonicotinoid pesticides exposure in the urban environment [topic page].

National Collaborating Centre for Environmental Health, 2018

"*…While there is evidence of environmental exposure to neonicotinoids, there is scientific controversy as to whether there are potential health risks to the public from exposure to neonicotinoids and their metabolites*."

Healthy built environment linkages toolkit. Version 2.

British Columbia Centre for Disease Control - Population & Public Health team, British Columbia Healthy Built Environment Alliance Steering Committee, 2018

"*The HBE Linkages Toolkit describes how population health is influenced by the design of our neighbourhoods, housing, transportation systems, natural environments, and food systems."*

Experiences with BC First Nations community-based radon testing: Successes and lessons learned.

Casey Neathway (right), Anne-Marie Nicol, and Lydia Ma, 2018

"*This paper will describe the components of a three-year, on-reserve, community-wide residential radon testing project…".*

Monitoring health impacts of climate change: A GIS application to display real-time surveillance of environmental data and health outcomes combined with demographic information.

Paul Belanger (right) and Nancy VanStone - KFL&A Public Health
BCCDC/NCCEH Environmental Health Seminar Series

"*…By overlaying information regarding environmental or weather hazards with both hazard-based health outcomes and demographic information, public health events can be identified earlier to better prevent, prepare for, and respond to emergencies."*

ENVIRONMENTAL HEALTH RESEARCH SCAN

SELECTED STAFF PUBLICATIONS (NCCEH or BCCDC)

1. Belanger P, VanStone N. **Surveillance des répercussions des changements climatiques sur la santé**. La série de séminaires sur la santé environnementale du BCCDC et du CCNSE; mai 10; Vancouver, BC: Centre de collaboration nationale en santé environnementale (CCNSE); 2018.Available from: http://www.ccnse.ca/content/surveillance-des-r%C3%A9percussions-des-changements-climatiques-sur-la-sant%C3%A9.
2. Belanger P, VanStone N. **Monitoring health impacts of climate change: A GIS application to display real-time surveillance of environmental data and health outcomes combined with demographic information**. BCCDC/NCCEH Environmental Health Seminar Series; mai 10; Vancouver, BC: National Collaborating Centre for Environmental Health (NCCEH); 2018.Available from: http://www.ncceh.ca/content/monitoring-health-impacts-climate-change-gis-application-display-real-time-surveillance.
3 British Columbia Centre for Disease Control - Population & Public Health team, British Columbia Healthy Built Environment Alliance Steering Committee. **Healthy built environment linkages toolkit. Version 2**. Vancouver, BC: BC Centre for Disease Control; 2018 May. Available from: http://www.bccdc.ca/health-professionals/professional-resources/healthy-built-environment-linkages-toolkit.
4. Centre de collaboration nationale en santé environnementale. **Pesticides néonocotinoïdes [pages thématique]**. Centre de collaboration nationale en santé environnementale; 2018 06 05 [updated 2018 06 05]; Available from: http://www.ccnse.ca/environmental-health-in-canada/health-agency-projects/pesticides-n%C3%A9onocotino%C3%AFdes.
5. Centre de collaboration nationale en santé environnementale. **Exposition aux pesticides en milieu urbain [pages thématique]**. Centre de collaboration nationale en santé environnementale; 2018 06 05 [updated 2018 06 05]; Available from: http://www.ccnse.ca/environmental-health-in-canada/health-agency-projects/pesticide-exposure-urban-environment.
6. National Collaborating Centre for Environmental Health. **Pesticide exposure in the urban environment [topic page]**. Vancouver, BC: NCCEH; 2018 06 05 [updated 2018 06 05]; Available from: http://www.ncceh.ca/environmental-health-in-canada/health-agency-projects/pesticide-exposure-urban-environment.
7. National Collaborating Centre for Environmental Health. **Neonicotinoid pesticides [topic page]**. Vancouver, BC: NCCEH; 2018 06 05 [updated 2018 06 05]; Available from: http://www.ncceh.ca/environmental-health-in-canada/health-agency-projects/neonicotinoid-pesticides.
8. National Collaborating Centre for Environmental Health. **Floods: prevention, preparedness, response and recovery [topic page]**. Vancouver, BC: NCCEH; 2018 06 20 [updated 2018 06 05]; Available from: http://www.ncceh.ca/environmental-health-in-canada/health-agency-projects/floods-prevention-preparedness-response-and.
9. Neathway C, Nicol A-M, Ma L. **Experiences with BC First Nations community-based radon testing: Successes and lessons learned**. Environ Health Rev. 2018;61(2):28-34. Available from: https://doi.org/10.5864/d2017-007.

NCCEH e-News (French and English)

1. Centre de collaboration nationale en santé environnementale. **e-Nouvelles du CCNSE: Nouvelle page thématique sur les inondation; Ressources sur les inondations et sur la sécurité – Alberta Health**

Services; Inondations – Catastrophes naturelles et temps violent – Centers for Disease Control and Prevention; plus… . Vancouver, BC: CCNSE; 2018 juin. Available from: https://tinyurl.com/ydd2xm6r.

2. National Collaborating Center for Environmental Health. **NCCEH eNews: New flood topic page; flood resources and safety information – Alberta Health Services; floods – natural disasters and severe weather – centers for disease control and prevention; more…** . Vancouver, BC: NCCEH; 2018 Jun. Available from: https://tinyurl.com/y6uafkhh.

INDIGENOUS ENVIRONMENTAL HEALTH

1. Bressler JM, Hennessy TW. **Results of an Arctic Council survey on water and sanitation services in the Arctic**. Int J Circumpolar Health. 2018;77(1):1421368-. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29383987.
2. Marshall RE, Levison JK, McBean EA, Brown E, Harper SL. **Source water protection programs and Indigenous communities in Canada and the United States: A scoping review**. J Hydrol. 2018;562:358-70. Available from: https://www.sciencedirect.com/science/article/pii/S0022169418303238.
3. Villeneuve PJ, Miller JD. **Re: Association between fish consumption, dietary omega-3 fatty acids and persistent organic pollutants intake, and type 2 diabetes in 18 First Nations in Ontario, Canada**. Environ Res. 2018;165:446-7. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29653825.

AGRICULTURAL OPERATIONS

1. Al-Kodmany K. **The vertical farm: A review of developments and implications for the vertical city**. Buildings. 2018;8(24). Available from: http://www.mdpi.com/2075-5309/8/2/24.
2. Martin W, Vold L. **Building capacity through urban agriculture: report on the askîy project**. Health Promotion and Chronic Disease Prevention in Canada. 2018;38(1). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-38-no-1-2018/building-capacity-through-urban-agriculture-report-askiy-project.html.

BIOLOGICAL AGENTS

BUILT ENVIRONMENT

1. Cartwright B, White M, Clitherow T. **Nearby nature 'buffers' the effect of low social connectedness on adult subjective wellbeing over the last 7 days**. Int J Environ Res Public Health. 2018;15(6):1238. Available from: http://www.mdpi.com/1660-4601/15/6/1238.
2. Federation of Canadian Municipalities. **Rural challenges, national opportunity. Shaping the future of rural Canada**. Ottawa, ON: CFM; 2018 May. Available from: https://fcm.ca/documents/issues/FCM-Rural-Canada-2018-EN.pdf.
3. Ghenadenik AE, Kakinami L, Van Hulst A, Henderson M, Barnett TA. **Neighbourhoods and obesity: A prospective study of characteristics of the built environment and their association with adiposity outcomes in children in Montreal, Canada**. Prev Med. 2018;111:35-40. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29462654.
4. Nicole W. **Nature and neurodevelopment: Differences in brain volume by residential exposure to greenness**. Environ Health Perspect. 2018;126(6):064001. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29863828.

5. Stappers N, Van Kann D, De Vries N, Kremers S. **Do physical activity friendly neighborhoods affect community members equally? A cross-sectional study**. Int J Environ Res Public Health. 2018;15(6):1062. Available from: http://www.mdpi.com/1660-4601/15/6/1062.

CHEMICAL AGENTS – METALS, GENERAL

General

1. Agency for Toxic Substances and Disease Registry. **Toxicological profile for Perfluoroalkyls**. Atlanta, GA: ATSDR; 2018. Available from: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=1117&tid=237.
2. Tasker TL, Burgos WD, Piotrowski P, Castillo-Meza L, Blewett TA, Ganow KB, et al. **Environmental and human health impacts of spreading oil and gas wastewater on roads**. Environ Sci Tech. 2018. Available from: https://pubs.acs.org/doi/10.1021/acs.est.8b00716.

CHEMICAL AGENTS - PESTICIDES

CHEMICAL AGENTS – SHALE GAS

1. Boudet HS, Zanocco CM, Howe PD, Clarke CE. **The effect of geographic proximity to unconventional oil and gas development on public support for hydraulic fracturing**. Risk Anal. 2018. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/risa.12989.
2. Rice AK, Lackey G, Proctor J, Singha K. **Groundwater-quality hazards of methane leakage from hydrocarbon wells: A review of observational and numerical studies and four testable hypotheses**. WIRES Water. 2018;5(4):1-. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1002/wat2.1283?af=R.

CHILDREN'S ENVIRONMENTAL HEALTH

1. Corominas L, Fernandez-Ansorena A, Martinez-Cepas P, Sanpera J, Obieta A. **Are inflatable play structures really safe for our children?** Journal of Children's Orthopaedics. 2018;12(3):282-7. Available from: https://online.boneandjoint.org.uk/doi/full/10.1302/1863-2548.12.170191.
2. Cox VSK, Corry RC, Brown RD. **Assessing UVB radiation received by school children in mid-latitude Ontario, Canada**. Children, Youth and Environments. 2018;28(1):30-41. Available from: http://www.jstor.org/stable/10.7721/chilyoutenvi.28.1.0030.
3. Lissak G. **Adverse physiological and psychological effects of screen time on children and adolescents: Literature review and case study**. Environ Res. 2018;164:149-57. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29499467.
4. Poore KR, Hanson MA, Faustman EM, Neira M. **Avoidable early life environmental exposures**. Lancet Planet Health. 2017;1(5):e172-e3.
5. Potvin Kent M, Pauzé E. **The effectiveness of self-regulation in limiting the advertising of unhealthy foods and beverages on children's preferred websites in Canada**. Public Health Nutr. 2018;21(9):1608-17. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29433594.
6. Sanders AP, Saland JM, Wright RO, Satlin L. **Perinatal and childhood exposure to environmental chemicals and blood pressure in children: a review of literature 2007-2017**. Pediatr Res. 2018. Available from: https://www.nature.com/articles/s41390-018-0055-3.

7. Tillmann S, Clark A, Gilliland J. **Children and nature: linking accessibility of natural environments and children's health-related quality of life**. Int J Environ Res Public Health. 2018;15(6):1072. Available from: http://www.mdpi.com/1660-4601/15/6/1072.
8. Wallner P, Kundi M, Arnberger A, Eder R, Allex B, Weitensfelder L, et al. **Reloading pupils' batteries: impact of green spaces on cognition and wellbeing**. Int J Environ Res Public Health. 2018;15(6):1205. Available from: http://www.mdpi.com/1660-4601/15/6/1205.

CLIMATE CHANGE

1. Decent D, Feltmate B. **After the flood. The impact of climate change on mental health and lost time from work**. Waterloo, ON: Intact Centre on Climate Adaptation 2018 Jun. Available from: https://www.intactcentreclimateadaptation.ca/wp-content/uploads/2018/06/After-The-Flood.pdf.
2. Dvorak AC, Solo-Gabriele HM, Galletti A, Benzecry B, Malone H, Boguszewski V, et al. **Possible impacts of sea level rise on disease transmission and potential adaptation strategies, a review**. J Environ Manage. 2018;217:951-68. Available from: https://europepmc.org/abstract/med/29679917.
3. Ho HC, Knudby A, Chi G, Aminipouri M, Lai DY-F. **Spatiotemporal analysis of regional socio-economic vulnerability change associated with heat risks in Canada**. Appl Geog. 2018;95:61-70. Available from: https://www.sciencedirect.com/science/article/pii/S0143622817305829.
4. Natural Resources Canada. **Canada in a changing climate: Advancing our knowledge for action**. Gatineau, QC: NRC. Available from: https://www.nrcan.gc.ca/environment/impacts-adaptation/19918.
5. Natural Resources Canada. **Canada in a changing climate: Assessment advisory committee**. Gatineau, QC: NRC. Available from: http://www.nrcan.gc.ca/environment/impacts-adaptation/19937.
6. Philipsborn RP, Chan K. **Climate change and global child health**. Pediatrics. 2018;141(6). Available from: https://www.ncbi.nlm.nih.gov/pubmed/29739824.

COMMUNICABLE AND INFECTIOUS DISEASES

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee. **Best practices for environmental cleaning for prevention and control of infections in all health care settings, 3rd edition**. Toronto, ON: Public Health Ontario, Queen's Printer for Ontario; 2018 Apr. Available from: https://www.publichealthontario.ca/en/eRepository/Best_Practices_Environmental_Cleaning.pdf.

DRINKING WATER

1. Canadian Water and Wastewater Association. **Health Canada consulting on new guideline for strontium in drinking water**. Ottawa, ON: CWWA; 2018 Jun. Available from: http://www.naylornetwork.com/cww-nwl/articles/index-v3.asp?aid=504725&issueID=59446.
2. Doré E, Deshommes E, Andrews RC, Nour S, Prévost M. **Sampling in schools and large institutional buildings: Implications for regulations, exposure and management of lead and copper**. Water Res. 2018;140:110-22. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29704756.

EMERGENCY PREPAREDNESS

1. U.S. Centers for Disease Control and Prevention. **Information on specific types of emergencies**. Atlanta, GA: CDC; Available from: https://emergency.cdc.gov/hazards-specific.asp.

2. U.S. Centers for Disease Control and Prevention. **CDC Situation awareness - 2018 Natural hazards and severe weather**. Atlanta, GA: CDC; Available from: https://emergency.cdc.gov/situationawareness/naturalhazards/.

ENVIRONMENTAL HEALTH SURVEILLANCE

1. Henly S, Tuli G, Kluberg SA, Hawkins JB, Nguyen QC, Anema A, et al. **Disparities in digital reporting of illness: A demographic and socioeconomic assessment**. Prev Med. 2017;101:18-22. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28528170.
2. Schinasi LH, Auchincloss AH, Forrest CB, Diez Roux AV. **Using electronic health record data for environmental and place based population health research: a systematic review**. Ann Epidemiol. 2018;28(7):493-502. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29628285.

ENVIRONMENTAL PLANNING

1. Bishop K, Corkery L, editors. **Designing cities with children and young people. Beyond playgrounds and skate parks**. New York, NY: Routledge; 2017. Available from: https://www.routledge.com/Designing-Cities-with-Children-and-Young-People-Beyond-Playgrounds-and/Bishop-Corkery/p/book/9781138890824.
2. Depietri Y, McPhearson T. **Integrating the grey, green, and blue in cities: Nature-based solutions for climate change adaptation and risk reduction**. In: Kabisch N, Korn H, Stadler J, Bonn A, editors. Nature-Based Solutions to Climate Change Adaptation in Urban Areas: Linkages between Science, Policy and Practice. Cham: Springer International Publishing; 2017. p. 91-109. Available from: https://doi.org/10.1007/978-3-319-56091-5_6.
3. Emilsson T, Ode Sang Å. **Impacts of climate change on urban areas and nature-based solutions for adaptation**. In: Kabisch N, Korn H, Stadler J, Bonn A, editors. Nature-Based Solutions to Climate Change Adaptation in Urban Areas: Linkages between Science, Policy and Practice. Cham: Springer International Publishing; 2017. p. 15-27. Available from: https://doi.org/10.1007/978-3-319-56091-5_2.
4. Gouldson A, Sudmant A, Khreis H, Papargyropoulou E. **The economic and social benefits of low-carbon cities: A systematic review of the evidence**. The Global Commission on the Economy and Climate: The New Climate Economy; 2018 Jun. Available from: https://newclimateeconomy.report/workingpapers/workingpaper/the-economic-and-social-benefits-of-low-carbon-cities-a-systematic-review-of-the-evidence/.
5. Kabisch N, Korn H, Stadler J, Bonn A, editors. **Nature-based solutions to climate change adaptation in urban areas: linkages between science, policy and practice**. Cham: Springer International Publishing; 2017. Available from: https://link.springer.com/book/10.1007/978-3-319-56091-5.
6. Pauleit S, Zölch T, Hansen R, Randrup TB, Konijnendijk van den Bosch C. **Nature-based solutions and climate change – four shades of green**. In: Kabisch N, Korn H, Stadler J, Bonn A, editors. Nature-Based Solutions to Climate Change Adaptation in Urban Areas: Linkages between Science, Policy and Practice. Cham: Springer International Publishing; 2017. p. 29-49. Available from: https://doi.org/10.1007/978-3-319-56091-5_3.

FOOD

Organic

1. Apaolaza V, Hartmann P, D'Souza C, López CM. **Eat organic–Feel good? The relationship between organic food consumption, health concern and subjective wellbeing**. Food Quality and Preference. 2018;63:51-62. Available from: https://www.sciencedirect.com/science/article/pii/S0950329317301702.

2. Koch S, Epp A, Lohmann M, Böl G-F. **Pesticide residues in food: attitudes, beliefs, and misconceptions among conventional and organic consumers**. J Food Prot. 2017;80(12):2083-9. Available from: http://jfoodprotection.org/doi/abs/10.4315/0362-028X.JFP-17-104.
3. Lacour C, Seconda L, Allès B, Hercberg S, Langevin B, Pointereau P, et al. **Environmental impacts of plant-based diets: How does organic food consumption contribute to environmental sustainability?** Frontiers in nutrition. 2018;5:8. Available from: https://www.frontiersin.org/articles/10.3389/fnut.2018.00008/full.

Safety

1. Charlebois S, Cunningham C, Music J, Somogyi S. **Biotechnology in food: Canadian attitudes towards genetic engineering in both plant- and animal-based foods**. Halifax, NS: Dalhousie University; 2018 May. Available from: https://cdn.dal.ca/content/dam/dalhousie/pdf/management/News/News%20%26%20Events/Dalhousie%20GMO%20Food%20Study%202018%20(EN).pdf.
2. de Oliveira LM, Das S, da Silva EB, Gao P, Gress J, Liu Y, et al. **Metal concentrations in traditional and herbal teas and their potential risks to human health**. Sci Total Environ. 2018;633:649-57. Available from: https://www.sciencedirect.com/science/article/pii/S0048969718309744.
3. Oldroyd RA, Morris MA, Birkin M. **Identifying methods for monitoring foodborne illness: Review of existing public health surveillance techniques**. JMIR Public Health And Surveillance. 2018;4(2):e57-e. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29875090.

Security

1. Charlebois S, Harris J, Giusto A, Keselj V, Mah C, Somogyi S, et al. **Canada's food price report 2018**. Halifax, NS: Dalhousie University; 2018 May. Available from: https://www.dal.ca/faculty/management/news-events/canada-s-food-price-report.html.
2. Coleman P, Gultig J, Emanuel B, Gee M, Orpana H. **Status report – FoodReach Toronto: lowering food costs for social agencies and community groups**. Health Promotion and Chronic Disease Prevention in Canada. 2018;38(1). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-38-no-1-2018/status-report-foodreach-toronto-lowering-food-costs-social-agencies-community-groups.html.
3. Raine KD, Atkey K, Olstad DL, Ferdinands AR, Beaulieu D, Buhler S, et al. **Healthy food procurement and nutrition standards in public facilities: evidence synthesis and consensus policy recommendations**. Health Promotion and Chronic Disease Prevention in Canada. 2018;38(1). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-38-no-1-2018/healthy-food-prucurement-nutrition-standards-public-facilities-evidence-synthesis-consensus-policy-recommendations.html.

GENERAL

1. Fok N. **Relevant research article summaries**. Environ Health Rev. 2018;61(2):64-5. Available from: https://doi.org/10.5864/d2018-010.
2. Nickel NC, Bolton J, MacWilliam L, Ekuma O, Prior H, Valdivia J, et al. **Health and social outcomes associated with high-risk alcohol use**. Winnipeg, MB: Manitoba Centre for Health Policy; 2018 Summer. Available from: http://mchp-appserv.cpe.umanitoba.ca/reference/alcohol_Report_web.pdf.
3. Wallar LE, McEwen SA, Sargeant JM, Mercer NJ, Papadopoulos A. **Prioritizing professional competencies in environmental public health: A best–worst scaling experiment**. Environ Health Rev. 2018;61(2):50-63. Available from: https://doi.org/10.5864/d2018-014.

HEALTH EQUITY

1. Diehl JA, Heard D, Lockhart S, Main DS. **Access in the food environment: a health equity approach reveals unequal opportunity**. J Plan Educ Res. 2018;0(0):0739456X17745358. Available from: http://journals.sagepub.com/doi/abs/10.1177/0739456X17745358.
2. Dyck LA, Snelling S, Morrison V, Haworth-Brockman M, Atkinson D. **Equity reporting: a framework for putting knowledge mobilization and health equity at the core of population health status reporting**. Health Promotion and Chronic Disease Prevention in Canada. 2018;38(3). Available from: https://www.canada.ca/en/public-health/services/reports-publications/health-promotion-chronic-disease-prevention-canada-research-policy-practice/vol-38-no-3-2018/equity-reporting-framework-population-health-status-reporting.html.
3. Lee J, Schram A, Riley E, Harris P, Baum F, Fisher M, et al. **Addressing health equity through action on the social determinants of health: A global review of policy outcome evaluation methods**. Int J Health Policy Manage. 2018;7:581+. Available from: http://link.galegroup.com/apps/doc/A543780012/HRCA?u=ubcolumbia&sid=HRCA&xid=a74fa8a7.
4. Public Health Agency of Canada. **Key health inequalities in Canada. A national portrait**. Ottawa, ON: PHAC; 2018. Available from: https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/science-research/key-health-inequalities-canada-national-portrait-executive-summary/hir-full-report-eng.pdf.
5. Wilson D, Heaslip V, Jackson D. **Improving equity and cultural responsiveness with marginalized communities: a position paper**. J Clin Nurs. 2018. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29869819.

HEALTH IMPACT ASSESSMENT

1. Buse CG, Lai V, Cornish K, Parkes MW. **Towards environmental health equity in health impact assessment: Innovations and opportunities**. Int J Public Health. 2018. Available from: https://link.springer.com/article/10.1007/s00038-018-1135-1.

INDOOR AIR

1. Fisk WJ. **How home ventilation rates affect health: A literature review**. Indoor Air. 2018;28(4):473-87. Available from: https://onlinelibrary.wiley.com/doi/abs/10.1111/ina.12469.
2. Mendell MJ, Macher JM, Kumagai K. **Measured moisture in buildings and adverse health effects: A review**. Indoor Air. 2018;28(4):488-99. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29683210.
3. Natural Resources Canada. **How to get the ventilation you need in your house**. Gatineau, QC: NRCan; 2018. Available from: https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/pdf/16-0114%20Home%20Ventilation_access_eng.pdf.
4. Singleton R, Salkoski AJ, Bulkow L, Fish C, Dobson J, Albertson L, et al. **Impact of home remediation and household education on indoor air quality, respiratory visits and symptoms in Alaska Native children**. Int J Circumpolar Health. 2018;77(1):1422669-. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29393004.

NUISANCE CONTROL

OUTDOOR AIR

1. Requia WJ, Mohamed M, Higgins CD, Arain A, Ferguson M. **How clean are electric vehicles? Evidence-based review of the effects of electric mobility on air pollutants, greenhouse gas emissions and human health**. Atmos Environ. 2018;185:64-77. Available from: https://www.sciencedirect.com/science/article/pii/S1352231018302711.
2. Vardoulakis S, Kettle R, Cosford P, Lincoln P, Holgate S, Grigg J, et al. **Local action on outdoor air pollution to improve public health**. Int J Public Health. 2018;63(5):557-65. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29679104.

PERSONAL SERVICE ESTABLISHMENTS

PEST CONTROL

PHYSICAL AGENTS

1. Barry R, Sulsky SI, Kreiger N. **Using residential proximity to wind turbines as an alternative exposure measure to investigate the association between wind turbines and human health**. Journal of the Acoustical Society of America. 2018;143(6):3278-82. Available from: https://asa.scitation.org/doi/abs/10.1121/1.5039840.

RADIATION

1. Cox VSK, Corry RC, Brown RD. **Assessing UVB radiation received by school children in mid-latitude Ontario, Canada**. Children, Youth and Environments. 2018;28(1):30-41. Available from: http://www.jstor.org/stable/10.7721/chilyoutenvi.28.1.0030.

RECREATIONAL AND SURFACE WATER

1. Agababova M, Hon C-Y. **Pilot study: Assessment of the presence of mold in indoor swimming pools**. Environ Health Rev. 2018;61(2):35-8. Available from: https://doi.org/10.5864/d2018-009.

RISK ASSESSMENT, COMMUNICATION

1. Harris J, Hinyard L, Beatty K, Hawkins J, Nsoesie E, Mansour R, et al. **Evaluating the implementation of a Twitter-based foodborne illness reporting tool in the City of St. Louis Department of Health**. Int J Environ Res Public Health. 2018;15(5):833. Available from: http://www.mdpi.com/1660-4601/15/5/833.
2. Osterheider A, Raupp J. **Risk communication of infectious disease outbreaks: an online training for public health officials**. Eur J Public Health. 2017;27(suppl_3):ckx186.59-ckx.59. Available from: http://dx.doi.org/10.1093/eurpub/ckx186.159.
3. Toppenberg-Pejcic D, Noyes J, Allen T, Alexander N, Vanderford M, Gamhewage G. **Emergency risk communication: Lessons learned from a rapid review of recent gray literature on Ebola, Zika, and Yellow Fever**. Health Commun. 2018:1-19. Available from: https://doi.org/10.1080/10410236.2017.1405488.

SENIORS' ENVIRONMENTAL HEALTH

1. Cheng J, Xu Z, Bambrick H, Su H, Tong S, Hu W. **Heatwave and elderly mortality: An evaluation of death burden and health costs considering short-term mortality displacement**. Environ Int. 2018;115:334-42. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29627746.
2. Raina P, Wolfson C, Kirkland S, th LG, editors. **The Canadian Longitudinal Study on Aging (CLSA). Report on Health and Aging in Canada. Findings from Baseline Data Collection 2010-2015**. Hamilton, ON: Statistics Canada, Canadian Longitudinal Study on Aging; 2018. Available from: https://www.clsa-elcv.ca/doc/2639.
3. Trecartin SM, Cummings SM. **Systematic review of the physical home environment and the relationship to psychological well-being among community-dwelling older adults**. J Gerontol Soc Work. 2018;61(5):567-82. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29668403.

TOBACCO, CANNABIS

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario). **Evidence brief: odours from cannabis production**. Toronto, ON: Public Health Ontario, Queen's Printer for Ontario; 2018 Apr. Available from: https://www.publichealthontario.ca/en/eRepository/Evidence_Brief_odours_cannabis_production.pdf.
2. Sumner W, Farsalinos K. **Lessons and Guidance from the Special Issue on Electronic Cigarette Use and Public Health**. Int J Environ Res Public Health. 2018;15(7):1338. Available from: http://www.mdpi.com/1660-4601/15/7/1338.

WASTE

ZOONOSES

1. Government of Newfoundland and Labrador. **Lyme disease - fact sheet**. Saint John, NL: Health; 2018. Available from: http://www.health.gov.nl.ca/health/pdf/lyme_disease_fact_sheet.pdf.
2. Health Canada. **Lyme disease prevention toolkit**. Ottawa, ON: Heath Canada. Available from: https://www.canada.ca/en/public-health/services/publications/diseases-conditions/lyme-disease-prevention-toolkit.html.
3. Ontario Agency for Health Protection and Promotion (Public Health Ontario). **Ontario lyme disease map 2018. Estimated risk areas**. Toronto, ON: Public Health Ontario, Queen's Printer for Ontario; 2018. Available from: https://www.publichealthontario.ca/en/eRepository/Lyme_disease_risk_areas_map.pdf.
4. Pfeiffer Mb. **In the battle against lyme disease, the ticks are winning**. 2018 Jun. Available from: https://blogs.scientificamerican.com/observations/in-the-battle-against-lyme-disease-the-ticks-are-winning/.
5. U.S. Centers for Disease Control and Prevention. **Preventing tick bites**. Atlanta, GA: CDC; Available from: https://www.cdc.gov/ticks/avoid/on_people.html.
6. Yeh H-Y, Chen K-H, Chen K-T. **Environmental determinants of infectious disease transmission: A focus on One Health concept**. Int J Environ Res Public Health. 2018;15(6):1183. Available from: http://www.mdpi.com/1660-4601/15/6/1183.

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